

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7670

Petition of twenty Vermont utilities and)
Vermont Public Power Supply Authority)
requesting authorization pursuant to 30)
V.S.A. § 248 for the purchase of shares of)
218 MW to 225 MW of electricity from H.Q.)
Energy Services (U.S.) Inc. commencing)
November 1, 2012 through 2038, issuance of)
findings that such purchases are entitled to)
rate recovery assurance, and requesting)
certain approvals under 30 V.S.A. § 108)

**REBUTTAL TESTIMONY OF
PATRICIA H. RICHARDS
ON BEHALF OF**

WASHINGTON ELECTRIC COOPERATIVE

November 19, 2010

1 Patricia H. Richards' rebuttal testimony (i) describes details of the sub allocation agreement
2 between WEC and VEC (ii) responds to issues raised by the Department of Public Service
3 ("DPS" or the "Department") related to WEC's load forecast pertaining to DSM and use of
4 avoided costs (iii) responds to the proposed use of marginal costs to evaluate resource
5 economics, and (iv) further addresses WEC's need for the power under Section 248(b)(2) and
6 economic benefit under Section 248(b)(4).
7

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1 **1. Introduction**

2 Q1. Please state your name, occupation and business address.

3 A1. My name is Patricia H. Richards and I am a Senior Consultant for La Capra Associates.

4 My business address is 277 Blair Park, Suite 210, Williston, Vermont.

5 Q2. Have you previously provided testimony in this docket?

6 A2. Yes, I filed testimony in this docket dated August 17, 2010.

7

1 Q3. What is the purpose of your testimony now?

2 A3. The purpose of my testimony is respond to testimony submitted by Mr. Lamont. In my
3 rebuttal testimony I will (i) describes details of the sub allocation agreement between
4 WEC and VEC (ii) responds to issues raised by the Mr. Lamont related to WEC's load
5 forecast pertaining to DSM and use of avoided costs (iii) respond to the proposed use of
6 marginal costs to evaluate resource economics, and (iv) addresses WEC's need for the
7 power under Section 248(b)(2) and economic benefit under Section (b)(4).

8

9 **2. Details of the Sub Allocation Agreement between WEC and VEC**

10 Q4. Is the return of HQUS power from VEC to WEC under the sub allocation agreement
11 defined by an actual need versus a projected need?

12 A4. The WEC-VEC sub allocation agreement defines specific conditions and a formula to
13 calculate when WEC is short power based on an actual need. This formula is based on
14 WEC's actual loads and resources rather than a future projection. Hence, regardless of
15 WEC's forecast of load into the future, the ability for WEC to access HQUS PPA power is
16 based on an actual shortfall occurring. The load forecast in WEC's analysis is an estimate,
17 while actual conditions will dictate when and if WEC is able to get power from the contract.
18 It is a formulaic process and is based on actual load and actual power supply deliveries. In
19 the event of a short term need, WEC must give VEC notice based on an interruption of its
20 existing supply resource. Neither event that triggers need is based on a projection or forecast.

1 Q5. Please describe the mechanics by which WEC accesses the HQUS PPA power through
2 the sub allocation agreement between WEC and VEC.¹

3 A5. WEC must take HQUS PPA power back from VEC in the event of a long term need or in
4 the event of a short term interruption in any of its existing supply resources. The sub
5 allocation agreement defines a term called the Coverage Ratio which is based on WEC's
6 preceding 12 month hourly Real Time Generation Obligation to its preceding 12 month Real
7 Time Load Obligation. When WEC's Coverage Ratio, which will be calculated each month,
8 is 97% or less, then WEC will notify VEC that WEC has a need for power. This take back of
9 the HQ US power is sized relative to WEC's need as calculated by the Coverage Ratio.
10 Therefore, WEC only gets the amount it needs subject to reaching the maximum block that
11 WEC is allocating to VEC. The agreement specifies that WEC must give VEC notice one
12 year in advance of a long term need. The other means by which WEC must take back HQ US
13 power is in the event of a short term interruption of an existing WEC supply source. WEC
14 must give one months notice after an interruption occurs and WEC must take back the HQUS
15 power during the event of an interruption.

16
17 Q6 . Is the take back from VEC an optional provision?

18 A6. No. WEC must take HQUS power back based on preset terms and mechanisms as
19 defined in the agreement between WEC and VEC. If a long term shortfall in WEC's

1 . WEC initially accesses the HQUS PPA through a Purchase Power Agreement with the Vermont Public Power Service Authority, and then sub-allocated to VEC.

1 portfolio exists, WEC must take back power. Also, if a short term interruption occurs of
2 an existing supply resource, WEC must take back the HQ US power in an amount based
3 on the outage which corresponds to the amount of power that is interrupted.
4

5 Q7. At the time a need exists, can WEC choose between the HQUS PPA power and or other
6 sources at that time based on price?

7 A7. No. At the time a need exists, then WEC must take the power back regardless if there are
8 cheaper alternatives available to WEC at that time. That is why the economic analysis
9 performed for WEC and filed as part of my August 17, 2010 testimony was necessary.
10 The analysis covered the duration of the HQUS agreement in order to evaluate the
11 economics of the contract over the entire term that power is available to WEC, because
12 the need could occur at any point from the contract's inception to its termination.
13

14 Q8. How does the sub allocation agreement help WEC?

15 A8. WEC's power supply mix is predominantly served by unit contingent generating
16 resources. Generating plants can have unanticipated outages and stop providing power
17 without notice. Such an event occurred in 2006 when Coventry generation facility
18 suffered a catastrophic fire and was shut down for over three months. This in turn can
19 leave WEC short power and expose WEC to prevailing market conditions. The sub
20 allocation agreement with VEC acts as a hedge to cover WEC in the event of a short term

1 failure of a supply resource. It also acts as a hedge on a long term basis if WEC is short
2 power due to either increasing loads or expiring contracts and resources. Both features
3 give WEC diversity and additional coverage in its power portfolio.

4
5 Q9. Are there other benefits to WEC?

6 A9. Yes. When WEC has an actual need for power, it will get power with favorable credit
7 terms that WEC would not otherwise likely have access to if it were negotiating another long
8 term replacement agreement. In addition, when WEC has an actual need, the structure of the
9 pricing of the HQUS PPA (that is passed through by the purchase power agreement with the
10 WEC-VPPSA HQUS PPA), acts a hedge against future market prices increases such as due
11 to carbon price increases. As stated in my August 17, 2010 testimony, the agreement with
12 VEC and WEC-VPPSA HQUS PPA Sub allocation agreement gives WEC the ability to get
13 at a renewable source of power at prices that are relatively stable over time and that in most
14 scenarios analyzed by WEC projected an economic benefit. In addition, by participating in
15 the agreements WEC is able to access a small block of power and in a denomination to the
16 tenths of a MW from HQUS who typically does not transact in such small quantities.
17 Therefore, if WEC is denied approval to participate in the HQUS power arrangement through
18 this docket, WEC will likely be prevented from obtaining power from HQUS due to in the
19 relatively small size of its needs.

1 **3. Load Forecast**

2 Q10. In Mr. Lamont's testimony he expresses concerns with WEC's load forecast. Please
3 explain your understanding of how this forecast was prepared.

4 A10. The 2010 load forecast was based on econometric and time series methods that used
5 historical data and relationships to project load into the future. My understanding of the
6 Department's objection is that while embedded DSM is incorporated into the projections,
7 additional or new cost-effective DSM programs and measures have not been.

8
9 Q11. Is WEC aware of additional cost-effective programs and measures that could or should
10 have been embedded in its load forecast for WEC?

11 A11. No. WEC is unaware at this time of EVTs plans for additional or new efficiency
12 investment that would increase the rate of efficiency gains at this time in WEC's service
13 territory, nor are there any programs and measures WEC has identified which should be
14 embedded into its load forecast. As Mr. Patt explains on behalf of WEC, WEC and EVT
15 have been quite successful at implementing significant cost-effective DSM measures and
16 programs over the previous two decades. Since WEC's customers are predominantly
17 residential (98% of WEC's customers fall into the residential category) it is unlikely that
18 additional residential DSM programs would have a significant impact on future load.
19 Furthermore, Mr. Lamont's testimony does not present persuasive evidence that additional
20 cost-effective DSM could be found to offset the need for 2.4 MW per hour from hour ending

1 8:00 through 23:00, delivered 7 days per week.²

2 Mr. Lamont indicates in his testimony that the Department estimates efficiency potential
3 in the order of 15% (page 4). Yet, it is unclear how this number was derived and if it is
4 appropriate to even apply to WEC customers/members. Mr. Lamont's testimony does not
5 address if the number is based on a multiple year horizon and if it has relevant to residential
6 customers that make up 98% of WEC's customer base. In fact, Mr. Lamont acknowledges
7 that the Department has not performed an analysis to determine whether there are additional
8 efficiency measures that can be undertaken by WEC. **See WEC Exhibit 12 (PHR 12), DPS**
9 **Answer to Interrogatory # 23.**

10 Regardless, even if the Department's alleged and substantiated claim that WEC can
11 realize additional unaccounted for efficiency gains, it does not materially diminish WEC's
12 need for the power. WEC's need for a hedge against its concentrated power portfolio still
13 exists. Even if WEC could hypothetically implement extraordinary efficiency measures that
14 kept demand for system wide power flat for the next twenty eight years (28), WEC would
15 still need the HQ power by 2027. **See WEC Exhibit 13 (PHR-13), WEC's projected**
16 **energy position resources versus load reflecting both base case and a flat energy**
17 **position.**

2. WEC's initial purchase power entitlement under the WEC-VEPPSA Power Purchase Agreement is 2.4 MW with the potential opportunity to reach up to 4.0 MW.

1 Q12. Would expanded efficiency potential in WEC's service territory have an impact on
2 WEC's need for participating in the various agreements?

3 A12. No, and that is a key point I wish to make. The various agreements for which WEC seeks
4 the Board's approval in this docket would still provide a hedge in WEC's portfolio regardless
5 of whether other DSM opportunities arise. This is due to predefined provisions which allow
6 the efficient use by WEC of up to 2.4 MW of energy should a short term or long term need
7 arise. No currently known or measurable DSM programs and measures could serve to
8 provide such a firm, reliable, flexible and durable hedge as this contract and the VEC sleeve.
9 Furthermore, regardless of whether WEC had assumed higher rates of new DSM potential in
10 its load forecast, the reality is that due to the sub allocation agreement between WEC and
11 VEC, if WEC does not have an actual shortfall of resources as compared to load, then it
12 cannot access the power from the HQUS PPA. WEC will only have access to the power
13 when it has an actual shortage. At most, expanded cost-effective efficiency potential or other
14 DSM programs could defer WEC's need for power perhaps a few years into the future.
15 However, a need for the HQUS power supply is still projected to occur in the planning
16 horizon as I have shown in my prefiled testimony and analysis of August 17, 2010, whether it
17 comes in the 8th or subsequent years under the contract term.

18

19

20

1 **4. Use of Marginal Cost to Evaluate HQ Contract Economics.**

2 Q13. In Mr. Lamont's testimony, the Department ties WEC's load forecast and its need for HQ
3 US power to a unique avoided cost profile (page 6). Does WEC believe this is relevant?

4 A13. No. First, WEC's prior rate design had a similar inclining block structure as the new
5 structure approved in Docket 7575, as do the other public power petitioners in this docket
6 The approved rate design with a lower-priced initial block, reflects a longstanding structure.
7 The new rates are merely a continuation of existing tariffs with refinements to capture
8 WEC's current and forward power supply situation. The Department has not provided
9 evidence that this structure will induce the level of conservation or efficiency, at the margin
10 or otherwise, that would replace the potential need for up to 2.4 MW of firm on-peak power
11 supply that could be used as a short term hedge or a long term resource. Second, Mr. Lamont
12 suggests that WEC has a "unique avoided cost regime" and therefore he could not include
13 that WEC considered sufficient DSM impacts in its analysis. That could be said about every
14 utility in Vermont, including the petitioners in this docket. WEC disagrees with Mr.
15 Lamont's assertions and conclusions put forward in his testimony regarding the use of a
16 unique avoided cost regime. As discussed below, the long run marginal cost projections
17 utilized in Docket 7575 were applicable only for WEC's rate design. *Supra.*, at Q/A 15.

18 Regardless, WEC prudently evaluated this contract based on the projected market prices
19 which would likely otherwise apply in the event the contract was not available. Every other
20 petitioner in this docket evaluated the contract similarly to WEC, which did not use a unique

1 avoided cost regime. WEC firmly believes the HQ US PPA should be evaluated relative to
2 market alternatives for a similar seven days per week, firm, on-peak energy product.

3 Notably, Mr. Lamont helps make the case for this latter evaluation approach on p. 8, lines 10-
4 15 of his testimony, where he notes that “the economics of the purchase are largely driven by
5 the relationship between the market price and the contract price, which is what the parties
6 analyzed.”

7
8 Q14. You have drawn attention to Mr. Lamont’s testimony where he states the “economics of a
9 purchase are largely driven by the relationship between the market price and the contract
10 price”. (p 8). Does WEC agree with this assertion?

11 A14. Yes. WEC agrees with this assertion and that is in fact how WEC evaluated the
12 economics of the HQUS PPA contract. As noted by Mr. Lamont, the other petitioners
13 used similar approaches and the Department concluded that there was an economic
14 benefit when using this approach for the duration of the contract. Therefore, as WEC
15 used the same approach, the DPS findings for WEC should be the same as for the other
16 utilities; that the contract provides an economic benefit.

17
18 Q15. Does WEC believe the Board’s Order in Docket 7575 mandated the use of long-run
19 marginal costs, developed for rate design purposes, which were largely based on
20 committed supplies, to evaluate future power supply contracts and resource options?

1 A15. No. WEC's long-run marginal cost projections were only relevant to the rate design
2 proceeding in Docket 7575, as noted by the Vermont Public Service Board. WEC does
3 not agree with the Department's assertion that the outcome of docket 7575 compelled it
4 to use current and committed long-run marginal costs for ratemaking purposes to evaluate
5 all future resource decisions. WEC disagrees with Mr. Lamont's assertion that the
6 marginal costs used to develop WECs tail block rate in Docket 7575 should be used to
7 evaluate the economic benefits of a predominantly on-peak HQ US PPA contract or any
8 other resource.

9
10 **5. Section 248(b)(2) – Need**

11 Q16. Does WEC believe the commissioning of the Vermont Wind project in Sheffield,
12 Vermont alleviates WEC's need for the HQ US contract and related arrangements with
13 VEC?

14 A16. No. While construction of the Vermont wind project has begun, the ultimate output from
15 the project is unknown at this time. Additionally, WEC still sees a need for power over
16 the term of this contract that justifies WEC's participation. Public Service Board approval
17 of the VPPSA HQUS PPA sub allocation agreement and WEC-VEC sub allocation
18 agreement would provide WEC with ready access to this power supply, when the need
19 arise. Through the combination of agreements that WEC has entered, effectively the
20 power from the HQUS PPA acts as a hedge to any short term interruption of WEC's

1 supply resources including the Vermont Wind project. It also provides WEC with a
2 stably priced, renewable, and long term contract coincident with the time when WEC's
3 loads outstrip the available resources in the portfolio. In fact, under WEC's base case
4 load forecast, only 8 years into the contract (2024) WEC could potentially have a long
5 term need due to declining output from its resources and increasing load. Therefore, for
6 14 years thereafter, when WEC shows a need, access to the HQ power is available to
7 WEC.

8 Q.17. Does WEC have a current need for power in its portfolio that is served by the sleeve and
9 other agreements that are part of this proceeding?

10 A.17. Yes, WEC has a present need for the agreements as they create a hedge against the
11 potential risk created by the concentration (or lack of diversity) in WEC's energy
12 portfolio. As previously described, this hedge could prevent or mitigate losses in an
13 event of an unanticipated outage such as the fire the Coventry generation facility. It is
14 acknowledged that such probability of a near term outage, like the fire, is low. However,
15 it is prudent business practice for WEC to hedge against such a contingency especially
16 where the hedge has no direct costs to WEC.

17
18 Q.18. Please summarize how the combination of agreements satisfies WEC needs?

19 A.18. Over the long term, WEC is projected to have a need for the HQ US power due to load
20 growth and resource attrition, as noted previously. Until the time when actual loads are

1 greater than supply, the contract provides a no cost hedge against supply interruption.
2 Finally, over its entire term, the HQ US PPA adds resource and pricing diversity to
3 WEC's portfolio.
4

5 **6. Section 248(b)(4)--Economic Benefit.**

6 Q.18. How does this contract provide an economic benefit to WEC and the state as a whole?

7 A.18. The economic benefits to WEC's ratepayers and the state occur because WEC and all
8 Vermont ratepayers have a ready, reliable, economic and durable resource to fill supply
9 gaps. The HQUS contract represents a resource that can be used in WEC's portfolio on
10 reasonably short notice to address supply interruptions as a result of its concentrated
11 power portfolio, thereby avoiding the need for WEC to incur added cost of an alternative
12 hedge product. In the future or long run, it will provide an economic source of power to
13 meet WEC's customer's needs. Furthermore, WEC consumers will only pay for the
14 power when an actual need arises. It is economic because WEC and all Vermont
15 consumers avoid potentially higher priced purchases from volatile spot and forward
16 energy markets as was modeled in WEC economic analysis under most scenarios. The
17 power comes with favorable credit terms and thereby avoids the expense and uncertainty
18 associated with supplies containing less favorable credit terms. WEC and Vermont
19 ratepayers are also provided access to renewable benefits that other long-term contracts
20 for a similar firm energy product would likely not offer.

1

2 Q.19 Does WEC's contract to obtain a portion of the HQUS PPA and passed through the Sub-
3 Allocation Agreement an economic to VEC?

4 Yes, for the reasons set forth in the rebuttal pre-filed testimony by Craig Kieny, VEC's
5 members and rate payers will benefit by having access to WEC's share of the HQUS
6 PPA's benefits to meet its power load needs without any collateral costs.

7

8 Q36. Does this complete your testimony?

9 A36. Yes at this time.